NAVAL HEALTH RESEARCH CENTER

MEDTAB & MEDTRAK USER'S GUIDE

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MEDTAB & MEDTRAK
USER'S GUIDE

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TABLE OF CONTENTS

SUMMARY

Background

Complete. accurate documentation of combat casualty medical information is important for effective medical management of the casualty. administrative purposes and medical regulating. The Naval Health Research Center (NHRC) has developed electronic medical documentation and automatic patient tracking software. The medical documentation program, called MEDTAB. allows a patient's care and treatment information to be recorded and stored as a computer record. The patient tracking program. called MEDTRAK. automatically admits and tracks patients as they move through the Surgical Company. Both software programs. which are designed to work together, are prototypes at this time.

Objective

The objective of this report is to provide descriptions of and instructions for the use of the MEDTAB and MEDTRAK software programs.

MEDTAB

MEDTAB is a computer software system that allows for documentation of vital medical information and tracking of casualties at forward echelons of care. The current version allows for medical and location documentation of the casualties as they move through Echelon II of the Medical Treatment Facility (MTF). The user transfers and receives casualties electronically and documents medical information at each area (i.e., triage, x-ray, ward) of the Surgical Company. The casualty's location in the facility and his or her medical record are instantly available to the user.

MEDTRAK

Used in the Combat Service Support Operation Center (CSSOC), the MEDTRAK software provides an electronic map of the MTF that actively tracks the location of each casualty within the facility by patient number via short-range radio frequency (RF) communication. MEDTRAK also provides options for generating reports of patients by number and location. Individual medical data can also be retrieved.

Hardware Requirements

For the MEDTRAK software, a 386 or higher PC and for the MEDTAB software, at least one hand-held, pen-based PC (TELXON) with built-in RF communication are required. To just look at the software capabilities, any 386 or higher PC can be used for both software programs.

Conclusion

The current versions of the MEDTAB and MEDTRAK programs are promising. These programs could become a vital part of medical management at the Battalion Aid Station and Surgical Company levels of care by offering complete documentation capabilities, automatic patient location and tracking capabilities, improved evacuation management, and streamlined resupply process, all of which would allow for better patient care and improved outcomes.

CHAPTER 1.

BACKGROUND

During combat, the management of medical information is critical for maintaining the continuity of casualty care (Department of the Navy, 1990). Generally, medical personnel have limited knowledge of the prior status of their patients other than what may have been noted on a paper field medical card, which has many deficiencies (Wilcox & Pugh, 1990). In addition, transcribing the information at Battalion Aid Stations (BAS), Surgical Companies (SC), and other medical treatment facilities (MTF) can introduce errors. Complete and accurate medical documentation is important for effective management of the casualty, for administrative purposes, and for medical regulating. To be effective, the flow of information must be maintained as the casualty is evacuated further to the rear.

The SC is responsible for receiving and treating casualties that have been evacuated from the BAS, providing treatment and surgical facilities, and providing temporary hospitalization to the casualties (Department of the Navy, 1990). At the SC, medical information is written on forms and in log books, and tracking information is maintained through the use of status boards, field phones, and runners. These tasks, accomplished manually, are labor intensive and require medical personnel to perform administrative duties, which takes away from the medical mission of the facility (Congleton, et al., 1986).

In response to these issues, the Naval Health Research Center (NHRC) has developed an electronic system for providing medical documentation and patient tracking capabilities. This system consists of two software programs, MEDTAB and MEDTRAK. MEDTAB was developed to record detailed treatment, diagnosis, and disposition data typical of a BAS or SC encounter. It was designed to be used in each of the functional areas of the SC (e.g., triage, OR, wards) where medical providers can quickly and easily update or review a casualty's medical record, which is stored as a computer file. Once treatment has been rendered at the BAS or SC, MEDTAB is used to record a complete description of the medical encounter. The device's touchscreen interface allows the user to enter additional injury and treatment data, orders for follow-on treatment, a range of patient conditions, and the final disposition of the patient. Documentation is accomplished by selecting injury and treatment information from lists or menus provided on screens specific to each of the functional areas. Further, the software is capable of documenting a very high percentage of all relevant information needed at the forward echelons of care (Wilcox, Emens, & Fitzgerald, 1994).

MEDTRAK, a computerized patient tracking system, was designed and developed for use at forward MTFs. The system consists of a network of hand-held pen-based personal computers (PC) equipped with radio frequency capability to maintain communication with a central processing PC. The MEDTRAK software tracks the location of each patient within the facility, generates status reports, and allows retrieval of individual medical data. When compared with the current manual method of patient tracking during mass casualty training exercises at the 1st

1

Medical Battalion Surgical Company, results showed that the MEDTRAK system admitted, identified, and tracked patients within the MTF significantly more accurately than did the manual method. Furthermore, the types of tracking errors produced by the manual system were found to be more detrimental to both the effective operation of the MTF and to the theater evacuation policy than were those produced by the MEDTRAK system. In addition to improved patient accountability, the MEDTRAK system reduced the administrative burden patient tracking placed upon medical personnel, thereby allowing them to perform clinical duties (Galarneau & Wilcox, 1994).

Although MEDTAB and MEDTRAK offer significant improvements in data collection, patient administration, and patient tracking, the greatest benefits of automating field medical care are rendered to users retrieving data, not entering them. Medical data stored electronically are easier to read, copy, aggregate, sort, analyze, and transmit than are data on paper records. As a result, electronic data can facilitate the delivery of timely, accurate information to all who need it.

The remainder of this report describes in more detail how to use the MEDTAB and MEDTRAK programs, provides an example patient treatment documentation scenario, and highlights potential benefits of automating patient tracking. Finally, future work and software development are also discussed.

CHAPTER 2.
ABOUT THE SYSTEM

Hardware

The hardware consists of at least one hand-held, pen-based personal computer (PC) and one laptop portable PC. The TELXON (PTC-1134, see references for more information) is a hand-held PC that has been found to be an attractive hardware environment. This device is placed in the patient treatment areas (triage/SST, ORs, and wards), and it is equipped with short-range radio frequency (RF) communication capability that allows for treatment and tracking information to be sent to the laptop PC. The laptop PC is used in the Combat Service Support Operation Center (CSSOC), as well as at the Surgical Shock Trauma (SST) area, and automatically receives information sent by the TELXON(s) to maintain the patient tracking and status board functions. To just view the software capabilities, any 386 or higher PC can be used for both software programs.

Software

MEDTRAK, which is used on the CSSOC PC, and MEDTAB, which is used on the hand-held PC(s), work together to allow the user to record patient care and to track patient location throughout the facility. Both of the software programs are prototypes and represent only a fraction of what can be done.

MEDTRAK:
The MEDTRAK software is used on the PC located in the CSSOC to maintain patient tracking and status board functions. As the casualties arrive at the MTF they are assigned a number and entered into the system. The information is automatically forwarded from the TELXON(s), via RF communication, to the CSSOC PC.

Each TELXON has the capability of recording patient care (see Appendix A) and tracking patient location. Whenever a patient is received into a location or transferred to the next location, the attending medical care provider depresses a button displayed on the PC. This action automatically initiates the RF communication to the CSSOC PC, which updates the location of the patient.

MEDTAB:
MEDTAB is a computer system that allows for documentation of vital medical information and tracking of casualties at forward echelons of care. The current version follows casualties as they move through the functional areas of the SC. The user transfers and receives the casualties electronically and documents medical information at each area (e.g.., triage, x-ray, ward). The casualty's location in the facility and medical record are instantly available to the user.

CHAPTER 3.
USING THE MEDTAB SYSTEM

Starting MEDTAB

⇒ At the **C:>** prompt, type **cd\medtab**. The prompt will now be: **C:>MEDTAB>** .

⇒ At the **C:\MEDTAB>** prompt, type **medtabx**. The MEDTAB 2.0 introductory screen will appear.

⇒ Click on the **OK** button. The MEDTAB Menu screen will appear.

MEDTAB Menu Options

The MEDTAB Menu screen allows the user to choose the desired MEDTAB module by clicking on one of the buttons described below:

- **MEDTAB Echelon One:**   Allows for documentation at the Battalion Aid Station.

- **MEDTAB Echelon Two:**   Allows for documentation and tracking of casualties at the Surgical Company.

- **About MEDTAB:**   Allows you to read about MEDTAB.

- **Exit to DOS:**   Allows you to exit the MEDTAB program.

Note: Chapter 3. of the User's Guide describes the **MEDTAB Echelon Two** module only.

Top Level Screen

The Top Level screen, shown in Figure 1, gives an overall view of the casualties currently in the system.

```
Thu Feb 27 1997,  16:052         MEDTAB Echelon Two


No   SSN            Loc         Name                      Select

000  000-00-0000    Lab         LAB PATIENTS          | ALL      | |  New     |
006  123-45-6789    X_RAY       UNKNOWN,              | A_AND_S  | | Patient  |
007  123-45-6789    A_WARD      UNKNOWN,              | A_WARD   | |          |
008  123-45-6789    A_AND_S     UNKNOWN,              | DISCHARGE|
009  123-45-6789    DISCHARGE   UNKNOWN,              | Dental   |
010  123-45-6789    Triage      UNKNOWN,              | G_WARD   | | Select   |
011  123-45-6789    Sick_Call   UNKNOWN,              | IN_TRANSI| | Patient  |
012  123-45-6789    Triage      UNKNOWN,              | -more-   |
013  123-45-6789    X_RAY       UNKNOWN,
014  123-45-6789    OR_1        UNKNOWN,
015  123-45-6789    PRE_OP      UNKNOWN,              | Send     | | Refesh   |
016  123-45-6789    [PRE_OP]    UNKNOWN,              | Patient  | | Patient  |
017  123-45-6789    OR_1        UNKNOWN,              |          | |  List    |
018  123-45-6789    DISCHARGE   UNKNOWN,
019  123-45-6789    DISCHARGE   UNKNOWN,
020  123-45-6789    [G_WARD]    UNKNOWN,              | Comm     |
021  123-45-6789    X_RAY       UNKNOWN,              |  ???     | |  Exit    |
```

Figure 1. Top Level screen of MEDTAB showing casualties currently in the Surgical Company.

Each patient has an identification line containing the patient number, social security number, location in the facility, and name. The buttons on the right side of the Top Level screen are described as follows:

- **Select Box.** You can view a list of all of the casualties, as seen in Figure 1, or just those in a specific area at the facility, including those "in transit." For example, if you want to know if there are any casualties in G Ward, highlight **G_WARD** in the **Select** box.

- **New Patient Button.** This button is used to admit a patient to the MTF. When it is selected, a pop-up box appears with buttons listing several patient data sources (**None Avail., MARCARD. MEDTAG. Laser Card, Flash Card, UPC Symbol, DD-1380, and CD ROM**). After you choose the data source. MEDTAB automatically assigns a number to the new patient and advances to the Triage Main screen, or click on **Cancel** to return to the Top Level screen.

- *Select Patient Button.* To review or update an individual's medical information, or to transfer or receive a casualty to or from an area in the MTF, you must first select the patient. To do this, highlight the patient's identification line at the Top Level screen, then click on the **Select Patient** button. The information about the patient you selected can now be updated.

- *Refresh Patient List Button.* This feature is important for maintaining accurate medical and patient tracking information because it initiates the communication between the TELXON and the CSSOC PC to provide up-to-date information.

Helpful Hint: Every time you go to the Top Level screen, click on the **Refresh Patient List** button <u>first</u> before doing anything else!

- *Exit Button.* Exit MEDTAB before you turn off your computer by selecting the **Exit** button on the Top Level screen. This takes you to the MEDTAB Menu screen, where you select the **Exit to DOS** button followed by the **OK** button to exit, or the **CANCEL** button to return to the MEDTAB Menu screen.

Note: Two buttons on the Top Level screen, **Send Patient** and **Comm ???**, are under development.

Main Screen

```
Thu Feb 27 1997, 16:061              O R _ 1
                                                        ┌─────────────┐
                                                        │  Top Level  │
                                                        └─────────────┘

┌──────────────────────────────────────────────────┐  ┌────────┐ ┌────────┐
│ Fri Jan 24 13:39    TRANSFER TO TRIAGE             │  │ MEDTAB │ │   14   │
│ Fri Jan 24 14:14    PRIORITY HIGH                  │  │  Info  │ │UNKNOWN │
│ Fri Jan 24 14:14    PRIORITY FOR OR                │  └────────┘ └────────┘
│ Wed Feb 19 11:37    IN TRANSIT                     │
│ Wed Feb 19 11:37    TRANSFER TO A_AND_S            │  ┌────────┐ ┌────────┐
│ Wed Feb 19 11:37    GUNSHOT WOUND                  │  │ Prior- │ │        │
│ Wed Feb 19 11:37    EXIT WOUND                     │  │  ities │ │  LAB   │
│ Wed Feb 19 11:37    BATTLE/FIELD DRESSING          │  └────────┘ └────────┘
│ Wed Feb 19 11:37    RINGERS LACTATE                │
│ Wed Feb 19 11:37    1500 cc                     ▊  │  ┌────────┐ ┌────────┐
│ Wed Feb 19 11:37    16 GAUGE NEEDLE                │  │  Next  │ │  MOC   │
│ Wed Feb 19 11:38    RESPONDS TO PAIN               │  │ Loca-  │ │  Send  │
│ Wed Feb 19 11:38    MEDEVAC                        │  │  tion  │ │  Poll  │
│ Wed Feb 19 11:39    IN TRANSIT                     │  └────────┘ └────────┘
│ Wed Feb 19 11:39    TRANSFER TO X_RAY              │
│ Wed Feb 19 11:39    XRAY                           │  ┌────────┐ ┌────────┐
│ Wed Feb 19 11:39    LEFT SIDE                      │  │  Xfer  │ │        │
│                     -more-                         │  │   to   │ │  Next  │
└──────────────────────────────────────────────────┘  │DISCHARG│ │        │
                                                        └────────┘ └────────┘
```
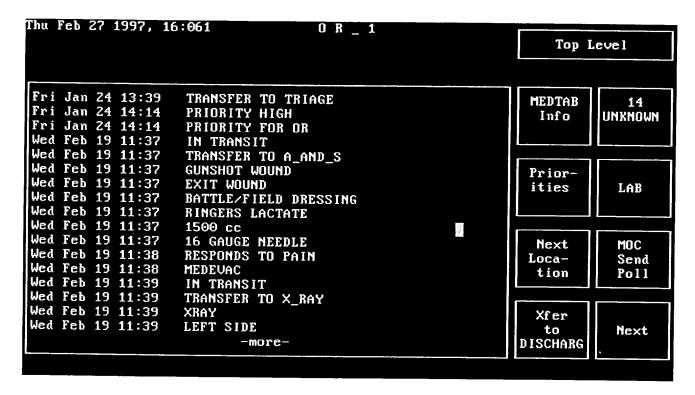
Figure 2. Viewing MEDTAB information for Patient #14 from the Main screen.

Overview of the Main Screen

After a patient is selected from the Top Level screen, a Main screen appears. Figure 2 depicts a Main screen as it appears *after* a function has been selected; however, the Main screen that is seen *before* selecting a function shows the buttons at the right side of the screen with a blank area instead of the information box. Each area in the MTF has a Main screen. The functions of the Main screen and buttons used to perform these functions are described as follows:

Reviewing a Patient's Identification Information

- *# Name Button.* The square with "14" and "UNKNOWN" in Figure 2 is the **# Name** button which displays the ID number and name of the patient whose record is being reviewed. Selecting the **# Name** button calls up Patient ID information, including name, rank, social security number, unit, age, birth date, blood type, time of injury, time of arrival, and pre-existing conditions. The data are displayed in the large box at the left of the screen, called the information box.

Note: The patient's last name will be listed as UNKNOWN, and identification and pre-existing conditions information will not be identified, unless a MARCARD is used to download the information.

7

Reviewing a Patient's Medical Record

- *MEDTAB Info Button.* For all areas except SST and Sick Call: When this button is selected, the casualty's medical record pops up in the information box. Each entry is displayed in a chronological list with a time/date stamp (Figure 2). All Main screen functions are available while the MEDTAB Info is displayed. The **MEDTAB Info** box remains on the screen until another function is performed. For SST and Sick Call: There is also an **OK** button and a **STRIKE OVER** button. By highlighting an entry, and clicking on the **STRIKE OVER** button, the entry will be marked with an asterisk to indicate that the item was entered in error. When finished, click on **OK** to return to the Main screen.

Patient Tracking

When a casualty is transferred to or received at an area, information is sent by RF to the CSSOC for patient tracking purposes. To transfer or receive a casualty to or from an area in the MTF, the casualty must first be selected from the Top Level screen. Three steps are required:

1. **Selecting the location for transfer.** This should be done *only* when the patient is ready to be transferred, and *not before*.

   - *Next Location Button.* Clicking on the **Next Location** button takes you to the Facility Map screen, which contains boxes for each area in the MTF. Highlight the box for the area (e.g., G_WARD) to which you are sending the casualty. Then click on the **RETURN** button to go back to the Main screen.

2. **Placing the casualty "In Transit."** In Transit status indicates that a casualty has been sent to a new location, but has not yet been received there. A patient can be placed "in transit" only *after* a location for transfer has been selected from the map; otherwise, the function will not work.

   - *Xfer to Button.* When this button is selected, its name actually changes depending on where you are sending the casualty. For example, if the patient is going to G Ward, the button changes to **Xfer to G_WARD**. This places the casualty into In Transit status until received at the next area. If you look at the Top Level screen you can see that patient #20's location is now in brackets to signify In Transit status (Figure 1).

3. **Receiving a casualty.** This function should only be used when a casualty has physically arrived at the intended location.

   - *Rec'd at Button.* This button is similar to the **Xfer to** button, because its label changes depending on where the casualty has been sent. If the patient has been sent to G Ward, the button name changes to **Rec'd at G_WARD**. After a casualty has been received into a specific area by clicking on the **Rec'd at** button, the Main screen appears.

Setting Priorities for SST, X-ray, and OR

- **Priorities Button.** This button allows you to determine the order in which casualties are to be transported to Surgical Shock Trauma (SST), X-ray, and the Operating Room (OR). To set priorities, click on the **Priorities** button. Next, highlight the area on the map to which you are sending the patient, and then the priority level you want to assign. Press the **Return** button to go back to the Main screen. The priorities that you set are written to the casualty's medical record. For now, these priorities will not appear in the CSSOC computer, except in individual medical records.

Requesting Lab Tests

- **LAB Button.** Requests for lab tests can be made by selecting this button on the Main screen.

  LAB WORK Screen. When you click on the **LAB** button, the LAB WORK screen comes into view.

  - **LAB Box.** In the **LAB** box, highlight either URINALYSIS or HEMATOLOGY to indicate the type of lab test being requested.
  - **New Lab Tests Box.** The specific lab tests available pop up in the **NEW LAB TESTS** box. From this box, select the test you want (see Table 1).
  - **Request Lab Test Button.** Complete the request by clicking on the **Request Lab Test** button. The requested tests are listed in the **PENDING LAB TESTS** box with a time/date stamp. You can request as many of the available tests as you want by repeating this process.

Table 1. Lab Tests Available for Request

URINALYSIS	HEMATOLOGY
HCT	WBC
LYMPHOCYTES	RBC
MONOCYTES	EPI

Reviewing Lab Results

- **Review Button.** The **Review** button on the LAB WORK screen calls up the LAB REVIEW screen, which displays the results of any lab tests previously performed. At this time, it says, "No results available," since it is not currently a functioning part of the program. The **Return** button takes you back to the LAB WORK screen.

Returning to the Main Screen From the Lab Work Screen

- **Return Button.** Located at the bottom of the LAB WORK screen, the **Return** button takes you back to the Main screen

Viewing Casualties in the System From the Main Screen

- *CSSOC Send Poll Button.* This button provides a list of patients similar to the one found at the Top Level screen. Highlighting the appropriate group in the **Select** box allows you to view those casualties you wish to see. The **Return** button takes you back to the Main screen.

Going to the Next Screen

- *Next Button.* This button takes you to the next screen in the series. If you continue pushing the **Next** button, you can return to the Main screen.

Discharge Screen

Discharging a Casualty

The Discharge screen is the last screen in each series, and it allows you to document the discharge status of the casualty by clicking on the **RETURN TO DUTY, AMBULATORY EVAC, MEDEVAC,** or **EXPIRED** button.

- *Next Button.* On the Discharge screen this button returns you to the Main screen.
- *Xfer to DISCHARG.* Located on the Main screen, this button discharges the patient if you select RETURN TO DUTY, AMBULATORY EVAC, or MEDEVAC.
- *Xfer to MORGUE.* If you select EXPIRED, this button sends the patient to the morgue, where you complete the documentation by receiving the patient at the morgue.

> **Note**: A Discharge screen is at the end of each series of screens. Use the **Next** button to bypass this screen until the casualty is ready to be discharged.

Printing a Casualty's Data

- *Print MEDTAB Data Button.* If you are hooked up to a printer, clicking on this button allows you to print an individual's medical data. When the printer is ready, click on **Ok** to print, or **Cancel** if you change your mind.

Returning to the Top Level Screen

Top Level Button. Selecting this button from a Main screen takes you out of the individual patient's record and returns you to the Top Level screen.

Progressing Through the MTF: A Guide for Each Area

The next section explains MEDTAB documentation capabilities at the different areas of the MTF. The MEDTAB software has a set of screens for each area. Some screens (e.g., Discharge) are common to all of the sets. Other screens (e.g., Triage Documentation) are specific to a particular area. The series of screens is listed at the beginning of the section for each area. A "practice" casualty, J. Doe, has sustained a gunshot wound to the left shoulder. The practice case example, shown in the shaded boxes, has instructions that will guide you through the system to show you how MEDTAB works.

Patient Admission

To admit a casualty into the MEDTAB system, you must be at the Top Level screen. MEDTAB allows for several patient data sources for initial input into the system. After you choose the data source, the program automatically assigns a number to the new patient.

Admitting J. Doe

⇒ Click on the **New Patient** button at the Top Level screen.
⇒ Click on the **None Avail.** button. J. Doe's patient number is automatically assigned. The Triage Main screen will appear.

Triage

Screen Series:

- ❶ Triage Main Screen
- ❷ Triage Documentation Screen
- ❸ Body Image Screen
- ❹ Discharge Screen

Triaging a Casualty

The Triage Documentation screen allows you to enter triage information such as respiration, pulse, blood pressure, eye opening response, verbal response, and motor response. MEDTAB then automatically calculates the Glasgow Coma Scale, Trauma Score, and Predicted Survival Rate, shown at the top of the screen. To enter the data, you simply highlight the information in each box. You can also select a triage category for the casualty.

Triaging J. Doe - GSW to Left Shoulder

⇒ At the Triage Main screen click on the **Next** button to go to the Triage Documentation screen.
⇒ Click on **6-9/MIN RESP** in the RESPIRATION list.
⇒ Click on **40-59/MIN PULSE** in the PULSE list.
⇒ Click on **76-89 SBP** in the BLOOD PRESSURE list.
⇒ Click on **EYE OPENS TO VOICE** in the EYE OPENING list.
⇒ Click on **ORIENTED** in the VERBAL RESPONSE list.
⇒ Click on **OBEYS COMMANDS** from the MOTOR RESPONSE list.

Note: When all of the triage information is entered, a Glasgow Coma Scale of 14, a Trauma Score of 9, and a Predicted Survival Rate of 75% will be displayed at the top of the screen.

⇒ Click on **DELAY** in the TRIAGE CATEGORY list.
⇒ Click on the **Next** button to go to the body image screen.
⇒ Draw a gunshot wound, left shoulder on the body image by using the pen freehand.
⇒ Click on the **Next** button to go to the DISCHARGE screen.
⇒ Click on the **Next** button to go to the Triage Main screen.

Transferring J. Doe to SST

J. Doe is ready to be transferred to SST:
⇒ Click on the **Next Location** button.
⇒ Click on the **SST** button at the map screen.
⇒ Click on the **RETURN** button.
⇒ Click on the **Xfer to SST** button to transfer the patient to SST.

SST and Sick Call

Screen Series:

❶ SST/Sick Call Main Screen
　　つ Assessment Documentation Screen
　　つ Treatment Documentation Screen
　　つ Patient Condition Documentation Screen
　　つ Discharge Screen
❷ Body Image Screen
❸ Discharge Screen

The SST and Sick Call Main screens are set up in the same way. At these screens, you enter assessment, treatment, and patient condition information. The **Personal Data** button acts the same as the # **Name** button previously described. The **Medical Record** button is the same as the **MEDTAB Info** button. All information entered here is written to the patient's medical record.

Documenting Assessment

The Assessment Documentation screen is where you enter the casualty's injury or problem information. Previous and current assessment information from the patient's medical record shows up in the **PREVIOUS ASSESSMENT** box.

Assessing J. Doe at SST

⇒ Click on the **Rec'd at SST** button at the IN_TRANSIT screen.
⇒ Click on the **ASSESSMENT** button at the MAIN MENU screen.
⇒ Click on the **WOUND** button in the ASSESSMENT list.
⇒ Click on **PENETRATING** in the WOUND list.
⇒ Click on the **Select** button.
⇒ Click on the **GUNSHOT WOUND** button in the PENETRATING list.
⇒ Click on the **Select** button.
⇒ Click on the **No** button in the "Exit Wound?" pop-up box.
⇒ Click on **UPPER TORSO** in the Location pop-up box.
⇒ Click on the **Select** button.
⇒ Click on **SHOULDER** in the Location pop-up box.
⇒ Click on the **Select** button.
⇒ Click on **LEFT SIDE** in the Which Side? pop-up box.
⇒ Click on the **Select** button.
⇒ Click on **NO MORE LOCATIONS** in the Location pop-up box.
⇒ Click on the **Select** button.
⇒ Click on the **Return to MAIN MENU** button.

Documenting Treatment

The Treatment Documentation screen provides a means to enter information about dressings applications, procedures, and medications. Previous treatment information, plus the data entered here, can be seen in the **PREVIOUS TREATMENT** box.

Treating J. Doe at SST

⇒ Click on the **TREATMENT** button at the SST Main screen.
⇒ Click on the **MEDICATIONS** button in the TREATMENT list.
⇒ Click on **IV'S** in the MEDICATIONS list.
⇒ Click on the **Select** button.
⇒ Click on the **RINGERS LACTATE** button in the IV'S list.
⇒ Click on the **Select** button.
⇒ Click on **1000 cc** in the IV VOLUME list.
⇒ Click on the **Select** button.
⇒ Click on **16 GAUGE NEEDLE** in the GAUGE OF NEEDLE list.

⇒ Click on the **Select** button.
⇒ Click on **ARM IV SITE** in the IV SITE list.
⇒ Click on the **Select** button.
⇒ Click on **RIGHT SIDE** in the Which Side? pop-up box.
⇒ Click on the **Select** button in the Which Side? pop-up box.
⇒ Click on **IV'S** in the MEDICATIONS list.
⇒ Click on the **Select** button.
⇒ Click on **BLOOD PRODUCT** in the IV'S list.
⇒ Click on the **Select** button.
⇒ Click on **UNKNOWN IV VOLUME** in the IV VOLUME list.
⇒ Click on the **Select** button.
⇒ Click on **UNKNOWN GAUGE** in the GAUGE OF NEEDLE list.
⇒ Click on the **Select** button.
⇒ Click on **ARM IV SITE** in the IV SITE list.
⇒ Click on **RIGHT SIDE** in the Which Side? pop-up box.
⇒ Click on the **Select** button in the Which Side? pop-up box.
⇒ Click on **NONE/NO MORE MEDICATIONS** in the MEDICATIONS list.
⇒ Click on the **Select** button.
⇒ Click on **PROCEDURES** in the TREATMENT list.
⇒ Click on **STANDARD PROCEDURES** in the PROCEDURES list.
⇒ Click on the **Select** button.
⇒ Click on **CLEAN/FLUSH WOUND** from the STANDARD PROCEDURES list.
⇒ Click on the **Select** button.
⇒ Click on the **DRESSINGS** button in the TREATMENT list.
⇒ Click on **BATTLE/FIELD DRESSING** in the DRESSINGS list.
⇒ Click on the **Select** button.
⇒ Click on **NONE/NO MORE DRESSINGS** in the DRESSINGS list.
⇒ Click on the **Select** button.
⇒ Click on the **Return to MAIN MENU** button.

Documenting Patient Condition

The Patient Condition Documentation screen allows you to enter the casualty's vital signs, blood loss, consciousness level, symptoms, and Glasgow Coma Scale. Previous patient condition information taken and any new information entered here can be seen in the **PREVIOUS PATIENT CONDITION** box.

Documenting J. Doe's Condition at SST

⇒ Click on the **PATIENT CONDITION** button at the MAIN MENU screen.
⇒ Click on the **VITALS** button in the PATIENT CONDITION list.
⇒ Click on **PULSE RATE** in the VITALS list.
⇒ Click on the **Select** button.
⇒ Click on the **40-59/MIN PULSE** button in the PULSE RATE list.

14

⇒ Click on the **Select** button.

⇒ Click on the **Yes** button in the "Pulse Rhythm regular?" pop-up box.

⇒ Click on **PULSE STRENGTH** in the VITALS list.

⇒ Click on the **Select** button.

⇒ Click on the **WEAK PULSE** button in the PULSE STRENGTH list.

⇒ Click on the **Select** button.

⇒ Click on **RESPIRATION** in the VITALS list.

⇒ Click on the **Select** button.

⇒ Click on the **6-9/MIN RESP** button in the RESPIRATION list.

⇒ Click on the **Select** button.

⇒ Click on **RESPIRATION QUALITY** in the VITALS list.

⇒ Click on the **Select** button.

⇒ Click on the **LABORED RESP** button in the RESPIRATION QUALITY list.

⇒ Click on the **Select** button.

⇒ Click on **SYSTOLIC BP** in the VITALS list.

⇒ Click on the **Select** button.

⇒ Click on the **76-89 SBP** button in the SYSTOLIC BP list.

⇒ Click on the **Select** button.

⇒ Click on **DIASTOLIC BP** in the VITALS list.

⇒ Click on the **Select** button.

⇒ Click on the **60-79 DBP** button in the DIASTOLIC BP list.

⇒ Click on the **Select** button.

⇒ Click on the **BLOOD LOSS** button in the PATIENT CONDITION list.

⇒ Click on **MODERATE BLOOD LOSS** in the BLOOD LOSS list.

⇒ Click on the **Select** button.

⇒ Click on the **CONSCIOUSNESS** button in the PATIENT CONDITION list.

⇒ Click on **RESPONDS TO PAIN** in the CONSCIOUSNESS list.

⇒ Click on the **Select** button.

⇒ Click on the **Return to MAIN MENU** button.

Transferring J. Doe to X-ray

J. Doe is ready to be transferred to X-ray:

⇒ Click on the **Next Location** button.

⇒ Click on the **X_RAY** button on the Map screen.

⇒ Click on the **RETURN** button.

⇒ Click on the **Xfer to X_RAY** button to transfer the patient to X-ray.

X-Ray

Screen Series:

- ❶ X-ray Main Screen
- ❷ Body Image Screen
- ❸ X-ray Documentation Screen
- ❹ Discharge Screen

Documenting a New X-ray

At the X-ray Documentation screen, you can enter the body location (see Appendix A) and side (Left, Right, or Both) of the area being x-rayed. Click on the **Select New X-ray** button to document the x-ray. The x-ray information documented here appears in the **PREVIOUS X-RAYS** box with a time/date stamp and is written to the patient's medical record.

X-raying J. Doe

⇒ Click on the **Rec'd at X_RAY** button at the IN_TRANSIT screen.

⇒ Click on the **Next** button to go to the body image screen.

⇒ Draw on the left shoulder where the x-ray is taken.

⇒ Click on the **Next** button to go to the X_RAY Documentation screen.

⇒ Click on **SHOULDER** in the body location **NEW X-RAY** box. To scroll up or down the list, click on **-more-**.

⇒ Click on **LEFT SIDE** in the other **NEW X-RAY** box.

⇒ Click on the **Select New X-ray** button to enter the x-ray information into the casualty's medical record.

⇒ Click on the **Ok** button if you entered the correct x-ray information. If you did not select the correct x-ray information, click on the **Cancel** button. You can then go back and click on the proper information.

⇒ Click on the **Next** button to go to the DISCHARGE screen.

⇒ Click on the **Next** button to return to the X_RAY Main screen.

Transferring J. Doe to OR1

J. Doe is ready to be transferred to OR1:

⇒ Click on the **Next Location** button.

⇒ Click on the **OR_1** button on the Map screen.

⇒ Click on the **RETURN** button.

⇒ Click on the **Xfer to OR_1** button to transfer the patient to OR1.

Operating Rooms: OR1 and OR2

Screen Series:

      ❶ OR Main Screen
      ❷ Body Image Screen
      ❸ Discharge Screen

Documenting an Operation

Currently, the only operation documentation capabilities of MEDTAB are your drawings on the Body Image screen. The only other operation information written to the patient's medical record is which OR (OR1 or OR2) the casualty was transferred to and received at.

Documenting J. Doe's Operation

⇒ Click on the **Rec'd at OR_1** button at the IN_TRANSIT screen.
⇒ Click on the **Next** button to go to the body image screen.
⇒ Draw on the left shoulder where the operation took place.
⇒ Click on the **Next** button to go to the DISCHARGE screen.
⇒ Click on the **Next** button to return to the OR_1 Main screen.

Transferring J. Doe to I Ward from OR1

J. Doe is ready to be transferred to I Ward:
⇒ Click on the **Next Location** button.
⇒ At the map, click on the **I_WARD** button.
⇒ Click on the **RETURN** button.
⇒ Click on the **Xfer to I_WARD** button to transfer the patient to I Ward.

Wards: A, G, and I

Screen Series:

      ❶ Ward Main Screen
      ❷ Bed Screen
      ❸ Blood Screen
      ❹ Discharge Screen

There are two documentation screens specific to the wards. The first is the Bed screen, followed by the Blood screen. The information you input at these screens goes into the casualty's medical record. Theoretically, CSSOC would use this information for administrative and medical

regulating purposes, however, the bed assignment and blood supply tracking functions are not yet operational in the MEDTRAK software.

Documenting Bed Number Assignment

The Bed screen allows the user to assign the casualty to a bed by type and number.

Documenting John Doe's Bed Assignment at I Ward

⇒ Click on the **Rec'd at I_WARD** button at the IN_TRANSIT screen.
⇒ Click on the **Next** button to go to the Bed screen.
⇒ Click on the **Bed #** button.
⇒ Click on the **1** button.
⇒ Click on the **Enter** button.
⇒ Click on the **Next** button to go to the Blood screen.

Documenting Blood Status: Type and Number of Units

The Blood screen allows the user to document blood type and how many units of blood the patient has received.

Documenting John Doe's Blood Transfusion

⇒ Click on the **O+** button in the right column of the BLOOD TYPE list.
⇒ Click on the **Blood Units ##** button.
⇒ Click on the **2** button.
⇒ Click on the **Enter** button.
⇒ Click on the **Next** button to go to the DISCHARGE screen.

Discharging John Doe

J. Doe is ready to be discharged:
⇒ Click on the **AMBULATORY EVAC** button.
⇒ Click on the **Next** button.
⇒ Click on the **Xfer to DISCHARG** button.

Dental

Screen Series:

     ❶ Dental Main Screen
     ❷ Discharge Screen

MEDTAB currently has no dental documentation capabilities. If a casualty is transferred to and received at Dental, only that information is written to the medical record.

Exiting MEDTAB

Exit MEDTAB from the Top Level screen before you turn off your computer.

⇒ Click on the **Top Level** button.
⇒ Click on the **Exit** button to take you to the **MEDTAB Menu screen.**
⇒ Select the **Exit to DOS** button. You will be asked, "DO YOU WANT TO EXIT TO DOS?"
⇒ Click on the **OK** button to exit, or **CANCEL** to return to the MEDTAB menu screen.

CHAPTER 4.
USING THE MEDTRAK SYSTEM

MEDTRAK is used to monitor all SC components. MEDTRAK not only benefits the medical regulator, but can also be of great help to the trauma physician in the SST. Using a map of the SC functional areas and displaying, by number, the patients currently in those areas, MEDTRAK can monitor the entire SC. The number and type of patients in each area can also be viewed. MEDTRAK also provides the user with individual casualty treatment information. The SC can be monitored three ways:

1. By entire SC.
2. By location.
3. By individual patient.

Starting MEDTRAK

⇒ At the **C:>** prompt, type **cd medtab**. The prompt will now be: **C:>MEDTAB>**.
⇒ At the **C:\MEDTAB>** prompt, type **medtrak**.

The Options Menu screen appears. The OPTIONS bar is highlighted at the bottom of the screen, as seen in Figure 3. Six options are available to you: (#)patient, (L)ist, (M)ap, (P)riorities, (R)eports, and E(x)it.

Commands and Functions

Using the OPTIONS bar and a few basic keystrokes will operate MEDTRAK.

Calling Up the Options Bar:

⇒ **ALT** is the **most important keystroke**. This will cause the Options Bar to appear at any time, except when you are in (R)eport.

Options found on the Options Bar:

(#)**patient.** This option will quickly display an individual patient's medical information, even if you are in another mode at the time.

⇒ **Number (#).** Simply type the patient's number without using ALT or brackets, then hit **Enter.**

(L)ist. This option displays the Patient Location screen (see Figure 3). Each patient's identification line contains the ID number, social security number, patient's location, and name.

⇒ ALT + L

```
Thu Feb 27 1997, 16:082           Patient Location

 ID   SSN            Loc        Name                              Select
┌─────────────────────────────────────────────────────┐ ┌──────────────┐
│006  123-45-6789   X_RAY       UNKNOWN,                │ │ALL           │
│007  123-45-6789   A_WARD      UNKNOWN,                │ │A_AND_S       │
│008  123-45-6789   A_AND_S     UNKNOWN,                │ │A_WARD        │
│009  123-45-6789   DISCHARGE   UNKNOWN,                │ │DISCHARGE     │
│010  123-45-6789   Triage      UNKNOWN,                │ │Dental        │
│011  123-45-6789   Sick_Call   UNKNOWN,                │ │G_WARD        │
│012  123-45-6789   Triage      UNKNOWN,                │ │IN_TRANSIT    │
│013  123-45-6789   X_RAY       UNKNOWN,                │ │I_WARD        │
│014  123-45-6789   A_AND_S     UNKNOWN,                │ │Lab           │
│015  123-45-6789   PRE_OP      UNKNOWN,                │ │MORGUE        │
│016  123-45-6789   [PRE_OP]    UNKNOWN,                │ │OR_1          │
│017  123-45-6789   OR_1        UNKNOWN,                │ │OR_2          │
│018  123-45-6789   DISCHARGE   UNKNOWN,                │ │PRE_OP        │
│019  123-45-6789   DISCHARGE   UNKNOWN,                │ │Sick_Call     │
│020  123-45-6789   [G_WARD]    UNKNOWN,                │ │Triage        │
│021  123-45-6789   X_RAY       UNKNOWN,                │ │X_RAY         │
└─────────────────────────────────────────────────────┘ └──────────────┘
    (#)patient    (L)ist    (M)ap    (P)riorities    (R)eports    E(x)it
```

Figure 3. The Patient Location screen, with ALL areas selected, with the Options Bar showing at the bottom.

The **Select** box at the right of the screen allows you to see all of the patients by clicking on **ALL** or to see a list of patients in a particular area by clicking on the name of the area.

(M)ap. This option displays a picture of the MTF layout, as shown in Figure 4, with the patient numbers of those in each location and in transit. This map can be modified to reflect the particular setup of the SC.

⇒ **ALT + M**

```
┌──────────────────────────────────────────────────────────────────────────────────┐
│  ┌─────────┐ ┌─────────┐ ┌─────────┐ ┌─────────┐ ┌─────────┐ ┌──────────┐         │
│  │ Triage  │ │ A_AND_S │ │ A_WARD  │ │ G_WARD  │ │ I_WARD  │ │DISCHARGE │         │
│  │         │ ├─────────┤ ├─────────┤ │         │ │         │ ├──────────┤         │
│  │ 10  12  │ │  8  14  │ │  7      │ │         │ │         │ │   9   18 │         │
│  │         │ │         │ │         │ │         │ │         │ │  19      │         │
│  │         │ │         │ │         │ │         │ │         │ │          │         │
│  │         │ ├─────────┐ └─────────┘ └─────────┘ └─────────┘ │          │         │
│  │         │ │IN_TRANSIT│ ┌─────────┐ ┌─────────┐ ┌─────────┐ │          │        │
│  │         │ ├─────────┤ │Sick_Call│ │ PRE_OP  │ │ MORGUE  │ │          │         │
│  │         │ │ 16  20  │ ├─────────┤ ├─────────┤ │         │ │          │         │
│  │         │ │         │ │  11     │ │  15     │ │         │ │          │         │
│  │         │ │         │ ┌──────┐┌──────┐┌──────┐┌──────┐   │          │         │
│  │         │ │         │ │X_RAY ││ OR_1 ││ OR_2 ││Dental│   │          │         │
│  │         │ │         │ ├──────┤├──────┤│      ││      │   │          │         │
│  │         │ │         │ │  6   ││  17  ││      ││      │   │          │         │
│  └─────────┘ └─────────┘ └──────┘└──────┘└──────┘└──────┘   └──────────┘         │
│ ■  (#)patient    (L)ist    (M)ap    (P)riorities    (R)eports    E(x)it           │
└──────────────────────────────────────────────────────────────────────────────────┘
```
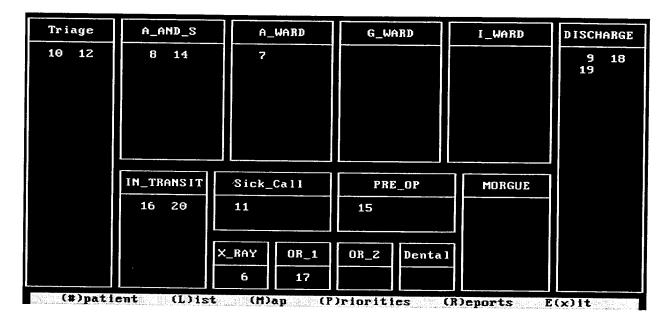
Figure 4. Map of the Surgical Company using the (M)ap function on the Options Bar.

Note on Figure 4 that only one patient number appears in the boxes for OR1 and X-ray, because only one patient at a time can actually be seen in those areas. Patients who are waiting to get into those areas will have brackets around the name of the location (when viewing the Patient List) to show that they are in transit.

(P)riorities. This option is under development.

(R)eports. This option displays the Report Menu, which allows you to print Patient Record, Patient List, and Patient Locations reports. Additional reporting capabilities are being developed and appear on the menu. These include Bed Status, Blood Status, Lab Status, Bed Inventory, and Blood Inventory.

⇒ **ALT + R**

E(x)it. This option exits MEDTRAK.

⇒ **ALT + X**

Printing Reports

┌──┐
│ **Note: Never print a report when the MTF is busy.** This will tie up the MEDTRAK system, │
│ and you will not be able to communicate or update patient information.   │
└──┘

After calling up the Reports Menu by typing **ALT + R**, click on one of the following selections to get a report with print capability.

Patient Record: Clicking on Patient Record displays a patient list with the Patient ID, social security number. location and name for each patient. You **must** highlight and enter an individual patient to continue. The Patient Record screen is shown in Figure 5. From this screen, previous treatment and assessment information. as well as current and next location information, can be viewed.

⇒ To print. **ALT + P**

⇒ To return to Reports Menu. hit **ENTER**.

Patient List: Clicking on Patient List displays the list of all patients, as seen in Figure 3.

⇒ To print. **ALT + P**

⇒ To return to the Reports Menu. hit **ENTER**.

Patient Locations: Clicking on Patient Locations displays the patient list. See Figure 3.

⇒ To print. **ALT + P**

⇒ To return to the Reports Menu. hit **ENTER**.

```
Patient ID: 7                              Blood Type: AB-
Name:        UNKNOWN,                      Arrival:    Fri Sep 20 10:04:51
SSN:         123-45-6789                   Special:    CONDITION 1
AGE:         85                                   :    CONDITION 2
Rank:        CIV                           Unit:       NHRC
Current Loc: A_WARD                        Next Loc:   NONE

 Fri Sep 20 10:05    FLASH BURN
 Fri Sep 20 10:05    1 TO 10% BURNED
 Fri Sep 20 10:05    2ND DEGREE BURN
 Fri Sep 20 10:05    DISTAL PULSE ABSENT
 Fri Sep 20 10:05    SYSTOLIC BP 76 TO 89
 Fri Sep 20 10:05    DIASTOLIC BP 60 TO 79
 Fri Sep 20 10:06    PULSE 100+ PER MIN
 Fri Sep 20 10:06    PULSE RHYTHM REGULAR
 Fri Sep 20 10:06    RESPIRATION 30+ PER MIN
 Fri Sep 20 10:06    BLISTER/ULCER
 Fri Sep 20 10:07    MEDEVAC
 Fri Sep 20 10:07    TRIAGE LEVEL THREE
 Fri Sep 20 10:08    IN TRANSIT
 Fri Sep 20 10:08    TRANSFER TO A_AND_S
 Fri Sep 20 10:08    CRICOTHYROIDOTOMY
                             -more-

   (#)patient    (L)ist    (M)ap    (P)riorities    (R)eports    E(x)it
```

Figure 5. Patient Record Report from (R)eports option.

MEDTRAK Monitor

The person monitoring MEDTRAK in the CSSOC is an important source of information for the other personnel. They will ask questions. and you will need to give a quick response. Personnel involved with patient tracking. location. and evacuation policy may wish to know where an individual patient is currently located and where their next location is likely to be. The trauma physician in the SST area may wish to know the number of patients (and their injury types) who

are waiting for the OR or x-ray in order to set a higher priority for more urgent cases. Table 2 shows a list of commonly asked questions and how MEDTRAK can be used to respond.

Table 2. Common MEDTRAK Questions

Question	Response
What does the patient situation look like? Quick!	Hit **ALT + L** to display the Patient Location list.
C'mon, c'mon I'm in a hurry! Where are they?	Hit **ALT + M** to display the map with the patient numbers in each location. • Remember that there will only be one patient listed per OR and X-ray. • Patients waiting for OR or X-ray will show up as IN TRANSIT.
Lemme see patient #10's record, quick!	Hit **ALT + L**, check the list to find patient #10, highlight it, then hit **ENTER**.
No! No! I need a printed copy!	Hit **ALT + R**, click on Patient Record, then highlight the patient ID # and hit **ENTER**. Then hit **ALT + P** to print.
There are 10 patients in transit! Where are they going?	Hit **ALT + L** for the Patient Location list, then click on IN TRANSIT in the **Select** box to call up the list of patients in transit.
Who is in OR1?	Hit **ALT + L**, then select OR1.
I've got two guys for OR. Can I send them both?	Hit **ALT + L** to display the Patient Location List. Find the two patients with the location [OR1]. Then for each patient, highlight the patient ID #, hit **Enter**, and note who has the higher priority.
Can I send this guy to X-ray now, or does he have to wait for the broken leg?	Same procedure as above, except look for X-ray.
What's the backlog at OR?	Hit **ALT + L** for the Patient Location List, and select IN TRANSIT for a list of patients waiting to get to a location.
What's the backlog at X-ray?	Same as above.

24

CHAPTER 5.
HARDWARE & SOFTWARE TROUBLESHOOTING

Problem	Action
1. Point of Contact for any questions or to get a copy of the software programs.	Dr. Paula Konoske Naval Health Research Center DSN 553-0730. Phone (619) 553-0730 konoske@vax309.nhrc.navy.mil
2. The TELXON "crashes" or stops functioning	Reboot the system by doing the following: • Turn off the TELXON • Hold down both the **Increase Contrast** button and the **Resume** button • Release the **Increase Contrast** button • Press and release the **Increase Contrast** button • Release the **Resume** button
3. The system reboot doesn't work	Reset the TELXON (done as last resort): • Open the access cover • Using a thin object press the blue **Reset** button
4. The TELXON does not turn on	Charge or replace battery pack, then reboot the TELXON
5. To recharge the battery pack	Under ordinary circumstances, the battery pack can be recharged while it is installed in the TELXON. Spare battery packs can be recharged separately using the battery charger.
6. To remove the battery pack	• Turn off TELXON • Press the battery pack latch as you slide the battery pack toward the bottom of the TELXON • Lift battery pack off TELXON
7. To install a new battery pack	• Line up the openings on the battery pack with the hooks on the back of the TELXON; place the openings over the hooks. • Slide the battery pack until it clicks into place
8. The radio fails to establish contact	• Change your location by a few feet and transmit again • Make sure antenna is securely attached • Recharge or replace the battery pack • Make sure receiving equipment is turned on and properly connected

Problem	Action
9. MEDTRAK software doesn't work	• Make sure **Caps Lock** is off • Restart MEDTRAK software
10. MEDTAB/MEDTRAK software locks up	• Reboot the system
11. To delete patient files from the MEDTAB/MEDTRAK system	• From DOS prompt, type **cd medtab** • c:\medtab>**cd medtab** • c:\medtab\medtab>**del pat.***
12. To reset automatic patient numbering	• edit pat.num file • insert the starting number

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Galarneau, M.R., & Wilcox, W.W. (1994). *Evaluation of a system for tracking patients at forward medical treatment facilites* (Report No. 94-35). San Diego, CA: Naval Health Research Center.

Telxon Corporation, 3330 West Market St, Akron, Ohio 44334. 216-867-3700/800-800-8001

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Appendix A.: Databases Used for Documentation

Body Locations Available for Documentation

NO MORE
LOCATIONS
OVERALL
INTERNAL
NON-SPECIFIC
MENTAL\
PSYCHOLOGICAL
HEAD-GENERAL
TOP OF HEAD
BASE OF HEAD
FOREHEAD

SIDE OF HEAD
TEMPLE
NECK-EXTERNAL
THROAT-
INTERNAL
EYE
NOSE
EAR
CHEEK
MOUTH
TONGUE

CHIN/JAW
FACE-GENERAL
SHOULDER
CHEST
UPPER BACK
UPPER SPINE
RIBS
ABDOMEN
LOWER BACK
LOWER SPINE
HIP

BUTTOCKS
GENITALS
GROIN
ABDOMEN
FULL ARM
UPPER ARM
ELBOW
FOREARM
WRIST
HAND
FINGER/THUMB

FULL LEG
UPPER LEG
KNEE
SHIN
CALF
ANKLE
FOOT
TOE

Injuries/Problems Available for Documentation

GUNSHOT WOUND
FRAGMENTATION
EVISCERATION
STAB WOUND
PUNCTURE WOUND
IMPALED OBJECT
PERFORATION
OTHER PENETRATING
LACERATION
ABRASION
CRUSHING WOUND
FRACTURE
DISLOCATION
AMPUTATION
AVULSION
SPRAIN/STRAIN
OTHER M/S WOUND
MAMMAL BITE
REPTILE BITE
INSECT BITE/STING
MARINE BITE/STING
UNKNOWN BITE/STING
SUPERFICIAL
OTHER WOUND TYPE
DEHYDRATION
DEEP FROSTBITE
SUPERFICIAL FROSTBITE
UNKNOWN FROSTBITE
DEG
HYPOTHERMIA
SNOW BLINDNESS
HEAT STROKE
HEAT EXHAUSTION
CRAMPS
BLISTER
OTHER HEAT/COLD PROB
NERVE AGENT
TEAR AGENT
BLISTER AGENT
BLOOD AGENT

CHOKE/VOMIT AGENT
BIOLOGICAL AGENT
RADIOLOGICAL
UNKNOWN CBR AGENT
OTHER CBR AGENT
INGESTED POISON
INHALED POISON
TOPICAL POISON
INJECTED POISON
BITE/STING
OTHER POISON/TOXIN
NEAR DROWNING
DROWNED
HYPOTHERMIA
ISCHEMIC STAGE
HYPEREMIC STAGE
UNKNOWN IMMERS
STAGE
WATER INHALATION
DECOMPRESS SICKNESS
OTHER WATER PROBLEM
ALTITUDE SICKNESS
SMOKE INHALATION
ASPHYXIA
MOTION SICKNESS
OTHER ENVIRONMENTAL
URI
PHARYNGITIS
TONSILLITIS
BRONCHITIS
ASTHMA
SINUSITIS
PNEUMONIA
RESP VIRAL SYNDROME
OTHER RESPIR PROB
GASTROENTERITIS
COLITIS
ULCER
DIARRHEA
CONSTIPATION

APPENDICITIS
DYSENTARY
GI VIRAL SYNDROME
OTHER GI PROBLEM
TENDONITIS
JOINT DERANGEMENT
ARTHRITIS
INTERVERT DISC DIS
OTHER MUSCULOSKEL
OTITIS EXTERNA
OTITIS MEDIA
CONJUNCTIVITIS
OTHER EYE/EAR PROB
FUNGAL INFECTION
BOIL/ABSCESS
DERMATITIS/RASH
SCABIES
CELLULITIS
FOLLICULITIS
PEDICULOSIS
INGROWN TOENAIL
OTHER SKIN PROBLEM
GONORRHEA
NONSPEC URETHRITIS
GENITAL HERPES
SYPHILIS
PELVIC INFLAM DIS
OTHER STD
NEUROLOGICAL
GANGRENE
FEVER/UNK ORIGIN
MALAISE/FATIGUE
HEADACHE
HEMORRHOIDS
HERNIA
HERPES SIMPLEX
HYPERTENSION
IMMUNOLOGIC
REACTION
OTHER DIS/INFECT

THERMAL BURN
CHEMICAL BURN
LIQUID BURN
ELECTRICAL BURN
STEAM BURN
FLASH BURN
HOT METAL BURN
DIRECTED ENERGY BURN
OTHER TYPE BURN
CONCUSSION
BLUNT TRAUMA
CONTUSION
BLAST INJURY
STROKE
SEIZURE
ELECTRIC SHOCK
OTHER INTERNAL PROB
COMBAT STRESS
ANXIETY
SITUATIONAL DISTURB
SUBSTANCE ABUSE/USE
DEPRESSION
OTHER BEHAV/PSYCH
UNKNOWN SHOCK TYPE
HYPOVOLEMIC
ANAPHYLACTIC
CARDIOGENIC
NEUROGENIC
PSYCHOGENIC
BACTEREMIC
FALL
FOREIGN OBJECT
DENTAL
OTHER PROBLEM TYPE
UNKNOWN PROBLEM
TYPE
UNKNOWN PROBLEM

Medications Available for Documentation

NONE/NO MORE
  MEDICATIONS
ASPIRIN
NSAID
ACETOMINOPHEN
CODEINE
TOPICAL ANALGESIC
OTHER ANALGESIC
8 MGS MORPHINE

16 MGS MORPHINE
24 MGS MORPHINE
32 MGS MORPHINE
RINGERS LACTATE
SALINE
D5W
BLOOD PRODUCT
OTHER IV
ORAL ANTIBIOTIC

INJECTED ANTIBIOTIC
TOPICAL ANTIBIOTIC
ATROPINE
TWO PAM CHLORIDE
DIAZEPAM
OTHER CBR MED
PREVENTIVE MED
ANTISEPTIC
SEDATIVE

TETANUS
ANTIHISTIMINE
STEROID
ATROPINE
TWO PAM CHLORIDE
DIAZEPAM
OTHER MEDICATION

Procedures Available for Documentation

NONE/NO MORE PROCEDURES
ASSISTED VENTILATION
CRICOTHYROIDOTOMY
ET TUBE
NG TUBE
CHEST TUBE
NASOPHARYNGEAL
OROPHARYNGEAL
NEEDLE THORACENTESIS
OTHER AIRWAY PROC
TREATED FOR SHOCK

CPR
ADMINISTERED OXYGEN
CHEST TUBE
ELEVATED EXTREMITY
ELEVATED HEAD
PLACED - AFFECTED SIDE
CLEAN/FLUSH WOUND
REINFORCE DRESSING
C-SPINE/BOARD
C-COLLAR
SPLINT

WRAP/BANDAGE
SLING
OTHER IMMOBILIZATION
SET FX/DISLOCATION
REMOVED IMPALED OBJ
REMOVED FOREIGN OBJ
INDUCED VOMITING
SALVAGED BODY PART
SUTURE
OTHER PROCEDURE

Applications Available for Documentation

NONE/NO MORE APPLICATIONS
TOURNIQUET
ICE/COLD PACK

HEAT PACK
DECON WIPE
IMMOBILIZE OBJECT

OINTMENT/GEL
SALINE DRESSING
OTHER APPLICATION

REPORT DOCUMENTATION PAGE

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13. ABSTRACT *(Maximum 200 words)*

The Naval Health Research Center (NHRC) has developed medical documentation and automatic patient tracking software that work together. The medical documentation program, called MEDTAB, was designed to allow a patient's care and treatment information to be recorded and stored as a computer record. The patient tracking program, called MEDTRAK, automatically admits and tracks patients as they move throughout the Surgical Company. This manual contains a description of the MEDTAB and MEDTRAK hardware and software and instructions for proper use.

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